

No. J-11011/ 86 /2002 - IA II (I)  
Government of India  
Ministry of Environment & Forests

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Tel No. 2436 3873  
Paryavaran Bhawan, CGO Complex,  
Lodi Road, New Delhi - 110 003

Dated February 10, 2004

To

The Jt. Executive President (Works)  
M/s Hindalco Industries Limited  
(a Unit of Birla Copper)  
309, World Trade Centre,  
Barakhamba Road,  
New Delhi - 110 001

Sub: Expansion of Copper Smelter and setting up of Zinc smelter plant by M/s Hindalco Industries Limited at village Lakhigam and Dahej, Tehsil Vagra, District Bharuch in Gujarat - environmental clearance req.

Sir,

This has reference to your letter No. IGCL/TIC/01D dated 30<sup>th</sup> September, 2002 along with project documents including EIA /EMP, questionnaire and CD containing all the documents and subsequent clarification furnished vide your letters dated 1<sup>st</sup> December, 2002 and 16<sup>th</sup> January, 2003 on the above mentioned project.

The Ministry of Environment & Forests has examined your application. It is noted that expansion proposal is for increase in the capacity of Copper Smelter Plant from 1.5 lakh TPA to 2.5 lakh TPA and setting up of zinc smelter plant of 1.0 lakh TPA capacity. Details of the products to be manufactured are given below:

Name	Capacity (TPA)
As melt copper plant	
Copper cathode	2,50,000
Sulphuric acid	7,35,000
Phosphoric acid (as P <sub>2</sub> O <sub>5</sub> )	1,80,000
Gold	7.5
Silver	75
Power	62.35MW
Oxygen	266400
Zinc smelter plant	
Zinc	1,00,000
Sulphuric acid	8,15,000
Power	67.35MW

By-products	Capacity (TPM)
Copper smelter expansion	
Selenium	20
PGM concentrate	0.00175
Granulated slag	32730
Phosphogypsum	75000
Hydro fluosilicic acid	2790
Zinc smelter plants	
Cadmium	33.3
Copper cement	35.8
Pb-Ag concentrate	1.83

The land area of the existing unit is 238.0 ha. The proposed expansion is within the existing land area. The company shall adopt Ausmelt Technology for copper smelter expansion and Roast-Leach-Electrowin type hydro-metallurgical route for zinc smelter plant. The project does not involve forest land and displacement of people. Water requirement of 1233.4m<sup>3</sup>/hr will be met from the GIDC water supply scheme. GIDC has given permission for drawl of 5.5 MGD water on 18.04.02. The solid waste will be in the form of ETP sludge, granulated slag, Phosphogypsum and jarosite which would be disposed off in secured landfill facility within the plant premises. It is also noted that NOC from Gujarat State Pollution Control Board has been obtained on 26<sup>th</sup> September, 2002. The public hearing panel has considered the project in its meeting held on 17<sup>th</sup> August, 2002. Total cost of the expansion project is Rs.900 crores.

2.0. The Ministry of Environment and Forests hereby accords environmental clearance to the above expansion project under the provisions of EIA Notification dated 27<sup>th</sup> January, 1994 as amended subsequently subject to strict compliance of the following specific and general conditions:

#### A. SPECIFIC CONDITIONS

- (i) All the conditions stipulated by the Ministry while according environmental clearance to the existing project vide its letter No. J-11011/31/2000-IA.II (I) dated 8<sup>th</sup> January, 2002 should be strictly implemented.
- (ii) As reflected in the EIAEMP effluent generation should not exceed 153m<sup>3</sup>/hr. Capacity of the existing ETP should be further augmented from 160m<sup>3</sup>/hr to 200m<sup>3</sup>/hr. As per the decision taken in the meetings regarding Charter for Corporate Responsibility on Environment Protection for copper and zinc industries, company should make efforts to achieve zero discharge through 100% recycle/reuse of treated waste water. Action plan in this regard should be submitted to the Ministry within three months. Till such time, company should utilize the treated effluent to the maximum extent possible for green belt development. However, additional treated effluent or during the rainy season, effluent could be discharged into the deep sea through HDPE pipeline at a point through multiple diffuser system as recommended by the NIO. The treated effluent should conform to the standards including Bioassay test as per the GPCB. The monitoring report should be submitted to the Ministry regularly.

- (iii) Fugitive emission of dust/acid mist vapours, fumes and SO<sub>2</sub> should be controlled and work environment monitored for prevailing contaminants regularly. Fugitive dust emission in the zinc concentrate handling area and at various transfer points should be minimized. The company should install bag filters in the calcine grinding, melting and casting sections of zinc smelter plant for recovery of dust. The dust recovered should be recycled in the process.
- (iv) As reflected in the EIA /EMP report, SO<sub>2</sub> containing off-gases from smelting, settling and converting furnaces in copper and zinc smelter plants should be cleaned and converted to sulphuric acid by Double Conversion Double Absorption (DCDA) Process Technology for maximum conversion of SO<sub>2</sub> to H<sub>2</sub>SO<sub>4</sub>. Industry should meet SO<sub>2</sub> emission limit of 2kg/tonne of H<sub>2</sub>SO<sub>4</sub> produced and emission limit of 50mg/Nm<sup>3</sup> of acid mist. Company should install fluoride scrubbing system for phosphoric acid plant so that fluoride concentration should conform to the prescribed standards of 25mg/Nm<sup>3</sup>.
- (v) The industry should develop a dedicated new secured landfill facility for jarosite from the zinc smelter plant as per the CPCB guidelines besides the land fill facility already developed for disposal of solid waste from copper smelter plant. Authorization under the Hazardous Wastes (Management & Handling) Rules, 2000 from the GPCB should be obtained. Ground water quality in the vicinity of the landfill should be regularly monitored and report submitted to the CPCB / SPCB/ Ministry once in six months.
- (vi) Green belt of adequate width and density in 25 ha. of project area in addition to the 62 ha. of area already afforested should be provided to mitigate the effects of fugitive emission all around the plant. The additional land required for green belt development should be procured and progress made in this regard should be reported to this Ministry within three months. The development of green belt along the periphery of plant and township should be canopy based as per CPCB guidelines.
- (vii) The solid hazardous waste/sludge generated from the process should be disposed off in a secured double lined landfill with leachate collection and leak detection system. The landfill should be constructed at a safe height from the highest water table. The design of the landfill should be approved by State Pollution Control Board as per Hazardous Wastes (Management and Handling) Rules as amended on 6<sup>th</sup> January, 2003.

#### B. GENERAL CONDITIONS

- (i) The project authorities must strictly adhere to the stipulations made by the Gujarat State Pollution Control Board.
- (ii) No further expansion or modifications in the plant should be carried out without prior approval of the Ministry of Environment & Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

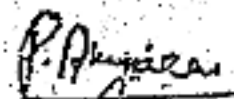
- (iii) The project authorities must strictly comply with the rules and regulations under Manufacture, Storage and Import of Hazardous chemicals Rules, 1989 as amended in October, 1994 and January, 2000. Prior approvals from Chief Inspectorate of Factories, Chief Controller of Explosives, Fire Safety Inspectorate etc. must be obtained.
- (iv) The project authorities must strictly comply with the rules and regulations with regard to handling and disposal of hazardous wastes in accordance with the Hazardous Wastes (Management and Handling) Rules, 1989 as amended in October, 1994 and in January, 2000. Authorization from the State Pollution Control Board must be obtained for collections/treatment/storage/disposal of hazardous wastes.
- (v) The overall noise levels in and around the plant area should be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 (dBA (night time).
- (vi) Occupational health surveillance programme should be undertaken as regular exercise for all the employees, specifically for those engaged in handling hazardous substances. The first aid facilities in the occupational health centre should be strengthened and the medical records of each employees should be maintained separately.
- (vii) The project proponent should have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction, education of Children, festivals, health centres, sanitation facilities, drinking water supply, community awareness and employment to local people whenever and wherever possible both for technical and non-technical jobs.
- (viii) The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA and Risk analysis. Report.
- (ix) A separate Environmental Management Cell equipped with full fledged laboratory facilities must be set up to carry out the Environmental Management and monitoring functions.
- (x) The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment & Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purpose.
- (xi) The implementation of the project vis-à-vis environmental action plans will be monitored by Ministry's regional office at Bhopal / State Pollution Control Board / Central Pollution Control Board. A six monthly compliance status report should be submitted to monitoring agencies.

- (xii) The Project Proponent should inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <http://envfor.nic.in>. This should be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office.
- (xiii) The Project Authorities should inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work, if any.

3.0. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.


4.0. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner will implement these conditions.

5.0. The above conditions will be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1986, the Environment (Protection) Act, 1986, the Hazardous Wastes (Management and Handling) Rules, 2003 and the Public Liability Insurance Act, 1991 along with their amendments and rules.

  
(Dr. P. L. Ahujara)  
Additional Director

Copy to:-

1. The Secretary, Department of Environment and Forests, Govt. of Gujarat, Block No. 14, 5<sup>th</sup> floor, Sachivalaya, Gandhinagar-382010.
2. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office, E-3/240 Arera Colony Bhopal - 462 016.
3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar New Delhi - 110 032.
4. The Chairman Gujarat Pollution Control Board, Paryavaran Bhavan, Sector-10A, Gandhi Nagar, -382043
5. JS(CCI-I), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
6. Director (Monitoring Cell), Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, New Delhi.
7. Guard File.
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9. Record File.

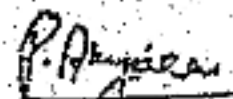
  
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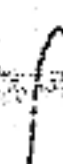
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